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10/540,103	06/20/2005	Rob Anne Beuker	NL02 1478 US	6426

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EXAMINER

AMINI, JAVID A

ART UNIT	PAPER NUMBER
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2628

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No. 10/540,103	Applicant(s) BEUKER ET AL.	
	Examiner JAVID A. AMINI	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14-21 and 25-30 is/are rejected.
- 7) ☒ Claim(s) 12, 13 and 22-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/28/2008 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7-9, 26, 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyu US 5,801,777, and in view of Kato US 7,224,890 B2.

Claim 1.

Lyu teaches an apparatus for re-ordering video data for a display (see the abstract), comprising: Lyu teaches a first transpose means for receiving video data and performing a first transpose process on such video data to create partially re-ordered video data (i.e. noted in col. 4, lines 49-59, also Lyu in fig. 1 as a prior art illustrates a block diagram represents at the left side is corresponded to the first transpose, and at the right side represent the second transpose, also a storage part shown with number 5); Lyu teaches a means for storing the partially re-

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ordered video data (a storage part shown in fig.1 as number 5); Lyu teaches a second transpose means for reading the partially re-ordered video data and performing a second transpose process on such partially re-ordered video data (i.e. noted in fig. 1 a block diagram represents at the right side is corresponded to the second transpose), to create fully re-ordered video data (i.e. noted in fig. 1 refs. # 0, 1, and 2).

Lyu is silenced about the first and second transpose means are configured to perform the first and second transpose processes to convert the received video data to the fully re-ordered video data that is a transposed video data of the received video data, the fully re-ordered video data being compatible to a transposed scanning technique for driving the display.

However, Kato teaches wherein the first and second transpose means are configured to perform the first and second transpose processes to convert the received video data to the fully re-ordered video data (e.g., in fig. 23 the partial transport stream that contains video data output from selector #10, only for the sake of argument, the first transpose can be considered as the partial transport stream in top portion of fig. 23 input to analyzing block #13, and the second transpose process can be considered as lower portion of fig. 23 input to demultiplexer #12) that is a transposed video data of the received video data, the fully re-ordered video data being compatible to a transposed scanning technique for driving the display (ref. Fig. 23, the transport stream at multiplexer #16 can be considered as a full re-ordered video data, see fig. 24 step 65).

Thus, it would have been obvious to a person skill in the art at the time of the invention to combine Kato's reordering/reformatting/re-encoding/converting technique into Lyu's converter system i.e. employed a VLD with DCT (col. 3 lines 37-61), because it is obvious to mismatch a video data in process of a format conversion.

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Claim 2.

Lyu obviously teaches the apparatus as set forth in claim 1 wherein the first and second transpose means include: one or more programmable hardware blocks (i.e. noted in fig. 3 e.g., an inverse DCT converting part).

Claim 3.

Lyu obviously teaches the apparatus as set forth in claim 1 wherein: the first transpose means includes a first programmable processor and the second transpose means includes a second programmable processor, such that the apparatus is programmable for any of a plurality of display formats, see the rejection of claim 1.

Claim 7.

Lyu teaches the apparatus as set forth in claim 3 wherein the first and second processors are programmable to re-order video data for two or more types of displays selected from the group consisting of a transpose scan CRT display, an LCOS device (i.e. noted in col.2 line 23), a PDP, a monochrome DMD, and a color DMD. Examiner's note: for clarity of the claim, Examiner selected LCOS device under the Markush groups.

Claim 8.

Lyu teaches the apparatus as set forth in claim 1, the storing means including: a means for storing at least two consecutive frames of the partially re-ordered video data (i.e. noted in the abstract).

Claims 9, 26-30.

Claims 9, 28-30 are rejected with similar reasons as set for in claims 1-3, above.

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Claims 4-6, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyu, Kato, and in view of Sgrignoli 5,329,319.

Claim 4.

Lyu and Kato are silenced about the apparatus as set forth in claim 3 wherein the first and second processors are fabricated on a common substrate (S), however, it is well known in the art the base layer of a structure of a chip is mostly used silicon as a substrate, the claimed invention does not even mention the type of the substrate.

The second cited reference Sgrignoli in fig. 6 illustrates an integrated circuit that is fabricated on a common substrate.

It would have been obvious to one of ordinary skill in the art at the time of the invention combine Sgrignoli into Lyu and Kato in order to provide the applicant's described structure, material, or acts for that described in the prior art reference Sgrignoli, in order to provide an improved television signal receiver.

Claim 5.

Claim 5 is rejected with similar reasons as set for in claim 4, above.

Claim 6.

Lyu teaches the apparatus as set forth in claim 4 wherein the storing means includes a separate IC that is electrically connected with the first and second programmable processors (i.e. noted in fig. 1).

Claim 27.

Claim 27 is rejected with similar reasons as set for in claim 4, above.

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Claims 10-11, 14-21, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyu, Kato, and in view of Tajima et al. 5,818,419, hereinafter Tajima.

Claim 10.

Lyu and Kato are silenced about the apparatus as set forth in claim 1, wherein the first transpose means includes: a means for receiving RGB video data; a means for writing the RGB video data to the storing means; a means for separating RGB video data into separate R, G, and B video data; and a means for writing the R, G, and B video data to the storing means.

However, Tajima teaches wherein the first transpose means includes: a means for receiving RGB video data; a means for writing the RGB video data to the storing means; a means for separating RGB video data into separate R, G, and B video data; and a means for writing the R, G, and B video data to the storing means (i.e. noted in fig. 1).

Thus, it would have been obvious to a person skill in the art at the time of the invention to combine Tajima into Lyu and Kato in order to provide a display device that can increase the number of conversion tables, which can be stored in a memory as look-up tables, by reducing the capacity of each conversion table, and can thus realize high picture quality.

Claim 11.

Lyu and Kato are silenced about the apparatus as set forth in claim 10, the storing means including: a means for storing at least one frame of the RGB video data; a means for storing at least one frame of the R separation video data, at least one frame of the G separation video data, and at least one frame of the B separation video data.

However, Tajima teaches a means for storing at least one frame of the RGB video data; a means for storing at least one frame of the R separation video data, at least one frame of the G

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separation video data, and at least one frame of the B separation video data (i.e. noted in col. 13, lines 44-55).

Thus, it would have been obvious to a person skill in the art at the time of the invention to combine Tajima into Lyu and Kato in order to provide a display device that can increase the number of conversion tables, which can be stored in a memory as look-up tables, by reducing the capacity of each conversion table, and can thus realize high picture quality.

Claim 14.

Lyu teaches the apparatus as set forth in claim 10, the receiving means including: a means for generating a plurality of sub-fields associated with a frame of the received video data (i.e. noted in fig. 4b frame data contains sub-fields 1, 2, 3, 4, which are associated with a frame), wherein each sub-field includes sub-field video data associated with the received video data (Examiner's note: the frame data in figs. 4 is associated with received video data); and a means for writing the sub-field video data for the plurality of sub-fields to the storing means (i.e. noted in fig. 1 storage part).

Claim 15.

Lyu teaches the apparatus as set forth in claim 14, the generating means including: a means for temporarily storing a predetermined amount of sub-field data that is generated serially (i.e. noted in figs. 4 the frame data), wherein the writing means transfers the predetermined amount of sub-field data from the temporary storing means to the storing means in parallel (i.e. noted in fig. 3 the storage parts 36, 37a, 37b, and 41 are considered as the temporary storage, because the conversion of a frame is necessarily to move to a next step of the conversion).

Claim 16.

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Claim 16 is rejected with similar reasons as set forth in claim 14, above.

Claim 17.

Lyu and Kato are silenced about the apparatus as set forth in claim 16, the reading means including: a means for addressing the sub-field video data for the plurality of sub-fields in the storing means; a means for reading the sub-field video data for the plurality of sub-fields in the storing means to create a fully re-ordered sub-field video data; and a means for communicating the fully re-ordered sub-field video data to downstream modules of a display processing system.

However, Tajima teaches the reading means including: a means for addressing the sub-field video data for the plurality of sub-fields in the storing means (i.e. noted in fig. 37, see sub-frame, and S1 and S2); a means for reading the sub-field video data for the plurality of sub-fields in the storing means to create a fully re-ordered sub-field video data; and a means for communicating the fully re-ordered sub-field video data to downstream modules of a display processing system (i.e noted in fig. 26 fully reordered sub-field video data “Qx”, and the resultant data Q corresponds to the pixel order on a display, see bridging paragraph in cols. 15-16).

Thus, it would have been obvious to a person skill in the art at the time of the invention to combine Tajima into Lyu and Kato in order to provide a display device that can increase the number of conversion tables, which can be stored in a memory as look-up tables, by reducing the capacity of each conversion table, and can thus realize high picture quality.

Claim 18.

Tajima teaches the apparatus as set forth in claim 14 wherein the sub-fields are RGB sub-fields and the sub-field data is RGB sub-field data (i.e. noted in col. 15 lines 41-50)

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Claim 19.

Tajima teaches the apparatus as set forth in claim 14, the generating means including: a means for temporarily storing a predetermined amount of RGB sub-field data that is generated serially, wherein the writing means transfers the predetermined amount of RGB sub-field data from the temporary storing means to the storing means in parallel (i.e. noted in col. 16 lines 5-9).

Claim 20.

Claim 20 is rejected with similar reasons as set for in claim 18, above.

Claim 21.

Claim 21 is rejected with similar reasons as set for in claim 17, above.

Claims 25.

Tajima teaches in the abstract the apparatus as set forth in claim 10, the receiving means including: a means for identifying an operational configuration for the receiving means based on a selected display.

Allowable Subject Matter

Claim 12-13, and 22-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the second transpose means including: with respect to limitations of claim 12, a means for addressing the RGB video data stored in the storing means; a means for reading the RGB video data stored in the storing means to create fully re-ordered RGB video data; a means for

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communicating the fully re-ordered RGB video data to downstream modules of a display processing system; a means for addressing the R, G, and B separation video data stored in the storing means; a means for reading the R, G, and B separation video data stored in the storing means; a means for re-ordering the R, G, and B separation video data into fully re-ordered R, G, and B color bar video data having consecutive downwardly scrolling R, G, and B scan lines; and a means for communicating the fully re-ordered R, G, and B color bar video data to downstream modules of a display processing system, and with respect to limitations of claim 22, the receiving means including: a means for generating a plurality of R separation sub-fields associated with a frame of the R separation video data, wherein each R separation sub-field includes R separation sub-field video data associated with the R separation video data; a means for generating a plurality of G separation sub-fields associated with a frame of the G separation video data, wherein each G separation sub-field includes G separation sub-field video data associated with the G separation video data; a means for generating a plurality of B separation sub-fields associated with a frame of the B separation video data, wherein each B separation sub-field includes B separation sub-field video data associated with the B separation video data; and a means for writing the R separation sub-field video data for the plurality of R separation sub-fields, the G separation sub-field video data for the plurality of G separation sub-fields, and the B separation sub-field video data for the plurality of B separation sub-fields to the storing means.

Claims 13, and 23-24 are objected with similar reasons as set forth in claims 12, and 22, respectively, see above.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAVID A. AMINI whose telephone number is (571)272-7654.

The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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